

FAST NEUTRON CAPTURE AND ACTIVATION
CROSS SECTIONS OF NIOBIUM ISOTOPES

BY

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ABSTRACT

The radiative neutron capture cross section of ^{93}Nb was measured from 0.3 MeV to 2.5 MeV. A large liquid scintillator and the time-of-flight technique were used to detect the prompt capture γ -rays. A grey neutron detector was employed as a neutron flux monitor. The data were normalized at 0.5 MeV to the capture cross section of ^{197}Au .

Capture and activation cross sections of ^{93}Nb and ^{94}Nb were calculated in terms of the statistical model of Hauser and Feshbach and the statistical gamma cascade model reported previously.

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